

NOTE. — Since most of this paper was put in type, I have received from Dr. C. Hart Merriam some unpublished field notes on Idaho birds made since the appearance of his report upon the subject. He kindly allows me to make the following extracts in order to bring the lists up to date :

Sphyrapicus thyroideus. — New to Idaho. Sawtooth City, Mr. Evermann. Near Coeur d' Aléne, August, 1895; Messrs. Bailey and Howell.

Sayornis saya.

Icteria virens longicauda. — Both recorded as common at Cœur d' Aléne. These three species are therefore to be added to the list of birds found in the vicinity of Fort Sherman.

I may say that early in 1897 about ten pairs of *Oreortyx pictus*, captured near Puget Sound, were liberated near the northern base of Mica Peak, and it was proposed to introduce the Bob White.

THE GREAT ROOSTS ON GABBERET ISLAND, OPPOSITE NORTH ST. LOUIS, MO.

BY O. WIDMANN.

FOR certain reasons, probably very 'mity' ones, the Martins (*Progne subis*) are anxious to leave, as early as possible, the narrow quarters in which they rear their brood, and to spend the night in the open air in company with others of their kind. The father absents himself from home at nights before the brood is fully fledged, and when the young are on the wing the mother, too, tries to steal away, but not until it is nearly dark, and when the darlings are safely lodged in the old quarters, and well fed. Of course the parents return with the dawn of day, long before the sun is up, to feed and lead them.

After about a week of practice in catching insects on the wing, the young need no more help from their parents and accompany them to the roost, but the whole family returns to the old home-stead early in the morning, to spend a few hours in play and merry-making. By and by these visits become shorter and shorter,

even irregular, and after the middle of August they cease altogether. To the casual observer the species may now become one of uncertain occurrence, but so much more certain and numerous are they to be found in the evening at their common roost. But where is the roost?

The experience of former years has taught us to look for it in the large willow tracts along the banks of the Mississippi; but it cannot remain long in the same place. The willows must be of a certain age and from ten to twenty feet high. At that period they form a heavy thicket, standing as close together as one sapling to every square foot. Of course not all of these can thrive for many years; many become sickly and succumb, leaving only the strongest to grow to trees. Therefore, if for no other reason, the Martins could not use the same tract for more than a few years.

Twelve years ago the roost was on Arsenal Island, ten miles below the present location; in the meantime it was above the city, near the mouth of the Missouri; the last two seasons it has been on Gabbaret Island, opposite the northern end of St. Louis. The island is nothing but a long and narrow sandbank of extremely variable dimensions according to the stage of the river. The highest part, less than a quarter of a mile in width, and twenty to twenty-five feet above the low water mark, is covered by the willow thicket. During the flood of last spring the whole island was under water, but with the falling of the water during the summer an immense sandbank arose all along its western side, as well as at its foot, and continued growing until with a stage of three feet above low water in September it reached, in places, a width of a quarter of a mile.

On the east the island is separated from the Illinois shore by a narrow and shallow arm of the river, forming large mud flats in July and August, and drying up more and more, as the low stage of water continued through September and October. The highest part of the island, an area of about twenty acres, is where the willows stand thickest, and the number of Martins that resorted there nightly was beyond computation, especially during the latter half of August, when they were most numerous. After the first of September it became soon evident that they were on the

decrease, though still plentiful until a cool spell about the middle of the month, after which only a few hundreds were remaining, and the last were seen on the 24th. In July and August some of the Martins arrive in the vicinity of the roost as early as an hour before sunset, alighting on isolated trees along the shores, or soaring high above the island. Half an hour before sunset some begin to alight on the sandbank, preferably on parts lately exposed and still damp. From now on Martins are pouring in from all sides, sometimes in regular streams, some more or less high, others low over the water, on which innumerable splashes reveal their presence at long distances.

At sunset a glance over the sandbank reminds one involuntarily of a sheet of sticky fly-paper, well covered with flies, so thickly dotted is the sand with Martins on areas of ten to twenty acres in extent. After the sun has set the Martins leave the sand in detachments and begin to mass and revolve above the willows. During the following ten or fifteen minutes there is a constant flying up from the sand and a coming of new arrivals, which take their places on the sand.

While the host on the sand is getting slowly smaller, the cloud above the island grows fast and forms a whirling mass of excited birds, uttering low and short, though melodious, calls; everyone moving in circles of its own, but the whole cloud swinging hither and thither, now low, then high, now contracting, then expanding, sometimes almost disappearing in the distance, then rolling back again in an instant, only to enact another stampede in another direction.

About twenty minutes after sunset the first Martins descend into the willows. This descent reminds one of that of Swifts into a chimney. The revolving cloud becomes funnel-shaped, almost touching the treetops, and a number of birds drop from the funnel into the willows, while the rest of the birds sweep on, rushing out and scattering in all directions, but in a moment all are flowing back, and the performance is repeated again and again until all are down.

During the early part of the evening we notice hardly any other kinds of Swallows among the Martins, but after sunset, when they begin to circle, we become suddenly aware of the presence of a

number of Bank Swallows (*Clivicola riparia*). They arrive low over the water in large droves and immediately mix with the flying Martins, taking part in all their evolutions and manoeuvres, and their squeaky voices become soon prominent amidst the soft notes of Progne.

Just before dark the region along the water's edge is fairly swarming with new arrivals, and in the same degree as the descent of Martins progresses, the proportion of the little Bank Swallows increases until toward the end they constitute the majority of the whirling birds. A few troops even arrive after all are down behind the willow tops, when night is getting ready to cover the island with her protecting wings. But even now are the roosting birds not yet at rest, and there is considerable stir and commotion going on among them. Numbers of restless birds are fluttering among the willow tops, apparently exchanging uncomfortable perches for more desirable ones, and a strange, confused noise is heard.

Martins and Bank Swallows are now sitting promiscuously in the upper branches of the willows, often half a dozen in one treetop and several on one little branch. This good-fellowship lasts throughout the season from the time they leave the nest till their common departure in September.

Swallows belong to our most sociable birds; not only do they vastly congregate among themselves, they also associate with other birds of gregarious habits, especially Blackbirds.

Since the feeding habits of the two families differ widely, the only opportunity for their association is to be found in the roost, and our great Gabberet roost bears splendid witness of such an affiliation, for the same willows that harbor the Martins and Bank Swallows are the nightly resort for thousands of Bronzed Grackles and Cowbirds.

There are plenty of Grackles' roosts scattered over the country, and they are a common occurrence in the larger river bottoms, but the arrival of the big flocks on the island in the evening is nevertheless a very pretty sight and an acceptable prelude to the grand spectacle to follow. They come to the roost pretty early in the evening, when the sun is yet above the horizon, and all the flocks that come from the Missouri side invariably

cross the river at the same spot, flying at a height of several hundred feet until near the island when they swoop down and in a bold curve, almost touching the water, rush over the sandbank and enter the willows at once. Here they begin their usual concerts, and the din of their unmelodious voices may, at a distance, be likened to escaping steam.

Of infinitely more interest than the Grackles are their relatives, the Cowbirds, because, like the Martins, they make themselves interesting at this particular season by their absence from most places where they were common a short time before. That this pronounced socialist and plebeian seeks the company of the aristocratic, high-born, purple-robed Martin may be a fact; the association seems to be intentional, not accidental. Years ago, when on Arsenal Island, the Cowbirds were with them; willow tracts are plentiful along the river, but our Cowbirds choose now that on Gabberet, the one in which the Martins roost. And they do not only roost together in the same thicket, they also visit the same sandbank before retiring.

The Grackles fly directly into the willows, but the Cowbirds, which also arrive in large, unmixed flocks, after alighting at the edge of the willows, come down upon the sand and stay there a few minutes. While the Martins keep more to the water's edge, the Cowbirds prefer the vicinity of the willows, into which they retreat at the approach of danger. In some spots they actually mingle, but the Cowbirds never stay long and have all retired before the Martins descend. Though they are all Cowbirds, no other Blackbirds among them, they show, at this time of molting, such a great variety of dresses, that it is hard to believe they belong all to one species. There are some old males in fine feathers with the chocolate head, but there are others with the chocolate entirely replaced by light gray in sharp contrast with the black of the rest of the body. This is a very striking dress; but there are many others much quainter, though not easily describable, where gray, in some almost whitish, blotches occur irregularly on different parts of the body, which has already assumed the glossy black of the adult male. Then there are the different shades of brown, gray and buff of the old and young females in different stages of molt. The Cowbirds are fre-

quarters of the roost for the same period as the Martins, beginning early in summer and deserting it, with the last Martins, about the middle of September.

About a mile north of this great roost is the Crow's roost, where the Crows of the neighborhood, some 400-500, congregate all summer and form the nucleus of a much larger gathering later in the year.

The mud flats which separate the island from the Illinois mainland are the favorite feeding grounds of the Killdeers (*Ægialitis vocifera*), Spotted, and Solitary Sandpipers (*Actitis macularia* and *Totanus solitarius*), and they roost on the large sandbank, where their voices are heard after nightfall. In daytime, as well as at night, they act as decoys for the hordes of northern Plovers and Waders, which are trooping down the great thoroughfare during August and September. On some days the mud flats are fairly swarming with the most interesting bird life, when Pectoral, Baird's, and Least Sandpipers (*Tringa maculata*, *bairdii* and *minutilla*) feed harmoniously with Semipalmated and Belted Piping Plovers (*Ægialitis semipalmata* and *Æ. meloda circumcincta*) in the same pools.

On September 7 the island enjoyed the visit of a distinguished guest, the Turnstone (*Arenaria interpres*), a lovely bird with a strikingly beautiful dress and melodious voice.

The two most interesting summer sojourners of Gabberet Island are the Song Sparrow (*Melospiza fasciata*) and the Least Tern (*Sterna antillarum*). The former finds here his most southern record for this section of the country, and the latter is remarkable for his good luck in escaping so long the notice of the egg-hog and pot-hunter in close proximity to a big city. The high water of early summer retarded nesting so much that the young were still begging for food in the latter part of August, and the species remained until the second week in September.